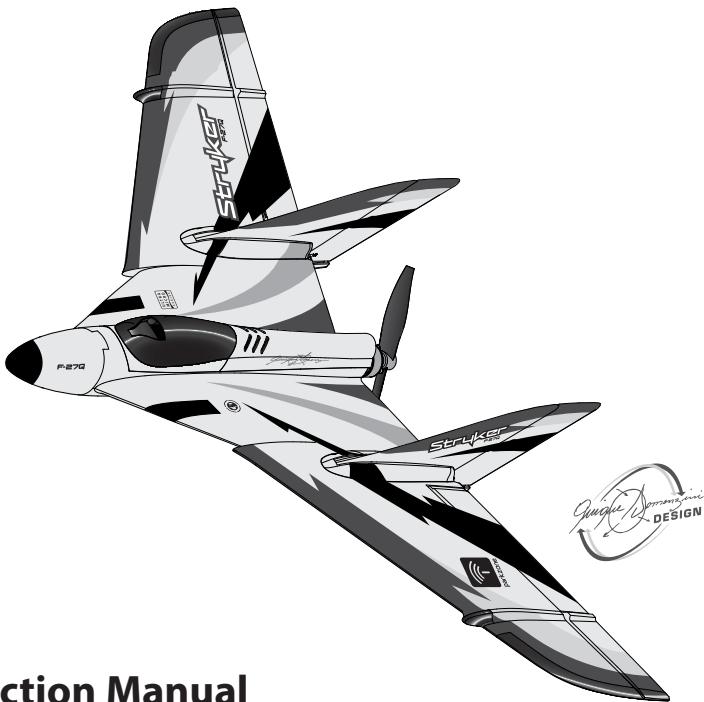




# Ultra Micro F-27Q Stryker 180



**Instruction Manual**  
**Bedienungsanleitung**  
**Manuel d'utilisation**  
**Manuale di Istruzioni**



## NOTICE

All instructions, warranties and other collateral documents are subject to change at the sole discretion of Horizon Hobby, Inc. For up-to-date product literature, visit [www.horizonhobby.com](http://www.horizonhobby.com) and click on the support tab for this product.

### Meaning of Special Language:

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:

**NOTICE:** Procedures, which if not properly followed, create a possibility of physical property damage AND little or no possibility of injury.

**CAUTION:** Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.

**WARNING:** Procedures, which if not properly followed, create the probability of property damage, collateral damage and serious injury OR create a high probability of superficial injury.

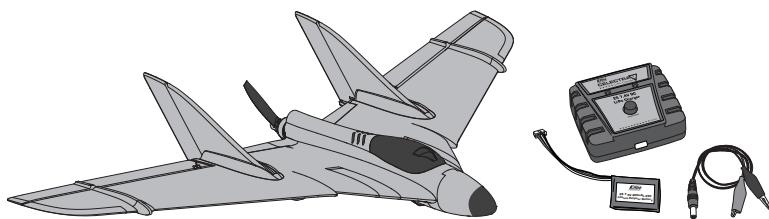
 **WARNING:** Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.

This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not attempt disassembly, use with incompatible components or augment product in any way without the approval of Horizon Hobby, Inc. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual prior to assembly, setup or use in order to operate correctly and avoid damage or serious injury.

**Age Recommendation: Not for children under 14 years.** This is not a toy.

Thank you for purchasing the ParkZone® Ultra Micro Series F-27Q Stryker 180. You're just a battery charge away from one of the most exciting ultra micro flying experiences available. The Ultra Micro Series F-27Q Stryker packs the punch of an E-flite® 3000Kv 180 brushless outrunner motor that delivers exhilarating speed and climb performance, just like the big F-27Q. It also has functional twin rudders so you can push the limits with extreme aerobatic maneuvers like flat spins, Snap Rolls, blenders and more. And you get this awesome performance without having to sacrifice any of the smooth, predictable flight characteristics that have made every Stryker a sport pilot favorite.

Before you take your first flight, however, you must thoroughly read this manual. The Ultra Micro Series F-27Q is considerably faster than many of the ultra micro aircraft you may be used to flying. Carefully following the setup and binding instructions in this manual will help ensure that first flight, and every one after, is as rewarding (and safe) as it can be.



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## Specifications

<b>Wingspan</b>	17.0 in (432mm)
<b>Length</b>	10.8 in (275mm)
<b>Weight</b>	2.15 oz (60 g) (without battery)

### Installed



180BL 3,000Kv  
brushless outrunner



Spektrum™ AR6400NBL Ultra Micro  
Receiver/BL ESC unit



(4) SPMAS2000L 1.7-Gram Linear  
Long Throw Servos

### Included



**Battery:** 200mAh 2S 25C Li-Po  
**Battery Charger:** 2S 7.4V Li-Po

### Needed to Complete

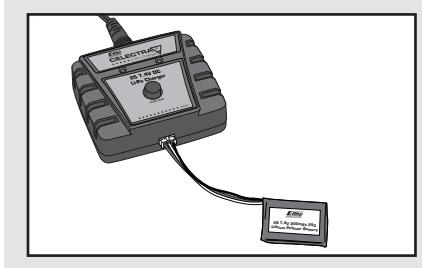


**Transmitter:** 2.4GHz with Spektrum™  
DSM2™/DSMX® with adjustable dual  
rates and expo (DX6i and up)

To register your product online, go to [www.parkzone.com](http://www.parkzone.com)

# Charging the Battery

Your Ultra Micro Stryker comes with a Celectra™ 2S 7.4V DC Li-Po Charger and 2-Cell 7.4V 200mAh 25C Li-Po battery. Please visit [www.horizonhobby.com](http://www.horizonhobby.com) for optional battery adapters. Refer to battery warnings. It is recommended to charge the battery pack while you are inspecting the aircraft. The flight battery will be required to confirm proper aircraft operation in future steps.



## The Battery Charging Process

1. Charge only batteries that are cool to the touch and are not damaged. Look at the battery to make sure it is not damaged e.g., swollen, bent, broken or punctured.
2. The connector of the battery is specifically designed to only allow it to fit into the charge port one way in order to prevent reverse polarity connection; however, check for proper alignment and polarity before proceeding to the next step.
3. Gently press the battery connector into the charge port located on the front of the charger.
4. When you make the connection successfully, the green LED blinking on the charger will slow, indicating proper connection.
5. Press the button on the charger; the red LED will illuminate, indicating charging has begun.
6. Charging a fully discharged (not over-discharged) 200mAh battery takes approximately 50–60 minutes.
7. When the battery is fully charged, the green LED will illuminate.
8. Always unplug the battery from the charger immediately upon completion of charging.

**⚠ CAUTION:** Overcharging a battery can cause a fire.

**⚠ CAUTION:** Only use a charger specifically designed to charge a Li-Po battery. Failure to do so could result in fire causing injury or property damage.

**⚠ CAUTION:** Never exceed the recommended charge rate.

## LED Functions under normal operation

1. Green LED blinking with power connected but without battery ..... Standby
2. Green LED blinking ..... Battery is connected
3. Blinking Red LED at varying speeds ..... Charging
4. Red and Green LED blinking simultaneously ..... Balancing
5. Solid Green LED ..... Full Charge
6. Red and Green LED flashing rapidly ..... Error

## Battery Warnings

The Battery Charger (EFLCU1007) included with the Ultra Micro Stryker has been designed to safely charge the Li-Po battery.

 **CAUTION:** All instructions and warnings must be followed exactly. Mishandling of Li-Po batteries can result in a fire, personal injury and/or property damage.

- By handling, charging or using the included Li-Po battery, you assume all risks associated with lithium batteries.
- If at any time the battery begins to balloon or swell, discontinue use immediately. If charging or discharging, discontinue and disconnect. Continuing to use, charge or discharge a battery that is ballooning or swelling can result in fire.
- Always store the battery at room temperature in a dry area for best results.
- Always transport or temporarily store the battery in a temperature range of

40–120° F. Do not store battery or model in a car or direct sunlight. If stored in a hot car, the battery can be damaged or even catch fire.

- Always charge batteries away from flammable materials.
- NEVER USE AN Ni-Cd OR Ni-MH CHARGER. Failure to charge the battery with a compatible charger may cause a fire resulting in personal injury and/or property damage
- Never discharge Li-Po cells to below 3V under load.
- Never cover warning labels with hook and loop strips.
- Never leave charging batteries unattended.
- Never charge batteries outside safe temperature ranges.
- Never charge damaged batteries.

## Low Voltage Cutoff (LVC)

When a Li-Po battery is discharged below 3V per cell, it will not hold a charge. The ESC protects the flight battery from over-discharge using Low Voltage Cutoff (LVC). Before the battery charge decreases too much, LVC removes power supplied to the motor. Power to the motor quickly decreases and increases, showing some battery power is reserved for flight control and safe landing.

When the motor power decreases then increases, please land the aircraft immediately and recharge the flight battery.

Disconnect and remove the Li-Po battery from the aircraft after use to prevent trickle discharge. Before storage, charge the Li-Po battery to full capacity. During storage, make sure battery charge does not go below 3V per cell.

**NOTICE:** Repeated flying to LVC will damage the battery.

# Transmitter and Receiver Binding

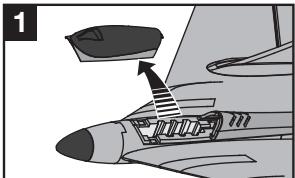
Binding is the process of programming the receiver of the control unit to recognize the GUID (Globally Unique Identifier) code of a single specific transmitter. You need to 'bind' your chosen Spektrum™ DSM2™/DSMX® technology equipped aircraft transmitter to the receiver for proper operation.

For a list of compatible DSM2™/DSMX® transmitters, please visit [www.bindnfly.com](http://www.bindnfly.com). When using a Futaba transmitter with a Spektrum DSM2 module, you will need to reverse the throttle channel.

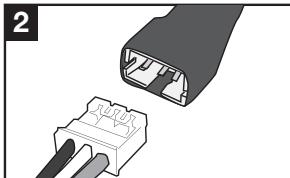
## ✓ Binding Procedure Reference Table

1. Refer to your transmitter's unique instructions for binding to a receiver.
2. Make sure the flight battery is disconnected from the airplane.
3. Power off the transmitter.
4. Connect the flight battery in the aircraft. The receiver LED will begin to rapidly flash (typically after 5 seconds).
5. Make sure transmitter controls are neutral and the throttle and throttle trim are in the low position.
6. Put your transmitter into bind mode. Refer to your transmitter's manual for binding button or switch instructions.
7. After 5 to 10 seconds, the receiver status LED will become solid, indicating that the receiver is bound to the transmitter. If the LED does not go to a solid light, refer to the Troubleshooting Guide at the back of the manual.

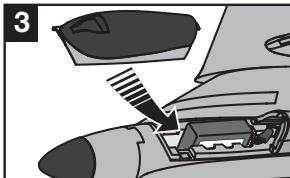
## Installing Flight Battery



1 Remove canopy from nose of aircraft.

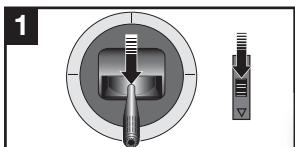


2 Connect fully charged flight battery to receiver.

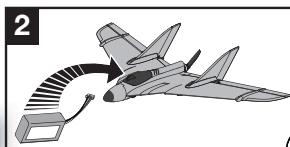


3 Put battery into battery compartment and install canopy .

## Before Flight

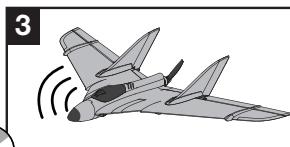


1 Lower throttle and throttle trim to lowest settings.



Power on Transmitter

2 Connect flight battery to aircraft.



Wait 5 Seconds

3 Series of tones  
Continuous LED

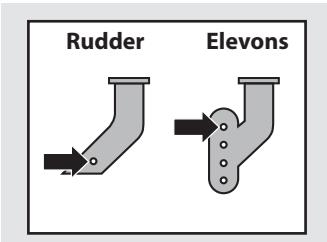
⚠ CAUTION: Always keep hands away from propeller. When armed, the motor will turn the propeller in response to any throttle stick.

# First Flight Preparation

1. Remove and inspect box contents.
2. Read this instruction manual thoroughly.
3. Install Flight battery in the airplane (once it has been fully charged).
4. Bind aircraft to your transmitter.
5. Make sure control rods move freely.
6. Make sure flight control surfaces are centered.
7. Perform the Control Direction Test with the transmitter.
8. Adjust flight controls and transmitter.
9. Adjust battery for center of gravity (CG).
10. Perform a radio system Range Check.
11. Find a safe and open area.
12. Plan flight for flying field conditions.

## Settings for Control Horns

The illustration shows factory settings for linkages on control horns. After flying, if you want to modify control throw, carefully adjust linkage positions for desired control response.

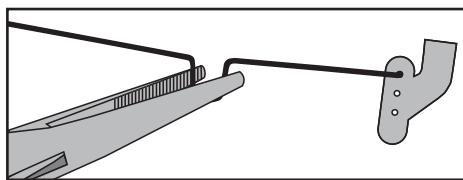


## Control Centering

Before first flights, or in the event of an accident, make sure the flight control surfaces are centered. Adjust linkages mechanically if control surfaces are not centered.

Use of the transmitter trims may not correctly center the aircraft control surfaces due to the mechanical limits of linear servos.

1. Make sure control surfaces are neutral when the transmitter controls and trims are centered. Where possible, transmitter sub-trim must be set to zero.
2. When needed, use a pair of pliers to carefully bend the metal of the linkage (see illustration).
3. Make the U-shape narrower to make the connector shorter. Make the U-shape wider to make the linkage longer.



**NOTICE:** When using a programmable transmitter, do not use sub-trim to adjust the center position of the servo.

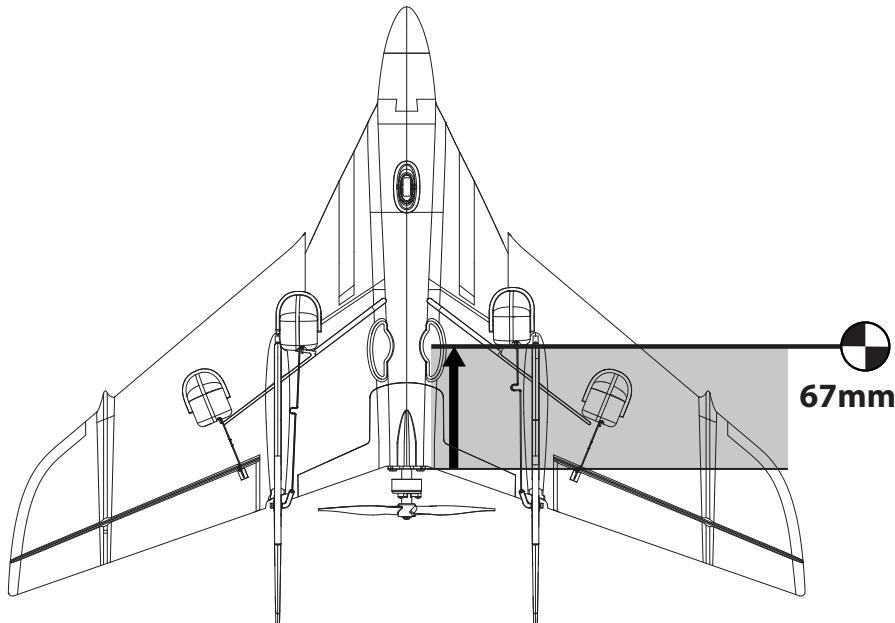
**NOTICE:** Ultra micro linear servos are unique in that they are calibrated to reach maximum travel at 100% travel adjust. Increasing the value above 100% will NOT result in more travel, but can cause the servo to lock and will result in a crash.

## Adjusting Center of Gravity (CG)

The recommended CG location is **67mm** (2.6 inches) forward from the firewall at the back of the fuselage. This CG location has been determined with the included 2S 200mAh 7.4V Li-Po battery installed approximately in the center of the battery cavity.

The battery cavity is oversized to allow for Center of Gravity adjustment. Start by placing the battery in the center of the cavity and adjust as necessary.

Balance the model on the edge of a metal ruler to find the Center of Gravity. Place the ruler at the bottom side of the fuselage.



# Transmitter and Model Setup

## Transmitter Setup

Flying wings are controlled by elevons (moveable surfaces on the wing). Elevons take the aileron control (move opposite directions), and elevator control (move up/down same direction) and mixes them together electronically through the transmitter.

Make sure both elevons move up and down (travel) the same amount. This model tracks well when the left and right elevon travel the same amount in response to the control stick. Set trims and sub-trims to zero, center control surfaces using pliers if needed, then adjust servo travel so both control surfaces travel the same amount up and down.

### DX4e and DX5e transmitters

Due to the speed and nature of the Ultra Micro Stryker, we recommend using a DSM2™/DSMX® transmitter with adjustable dual rates, exponential and travel adjust. Without these capabilities, DX4e and DX5e transmitters will operate this model with some flying limitations.

**NOTICE:** When using a DSMX non-computer transmitter (DX4e/DX5e) with multiple aircraft, always re-bind and set a model's failsafe before each flight. Please refer to your transmitter's manual for failsafe instructions.

We recommend setting all channels at Normal in servo reversing when using DX7, DX8, JR® 9303/9503, 11X and 12X transmitters.

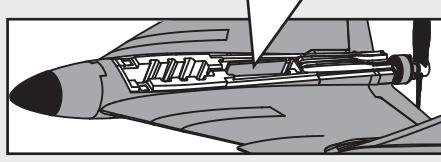
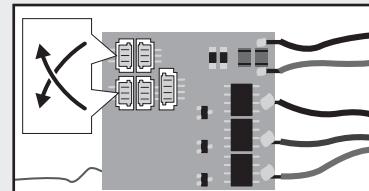
For the DX6i, we recommend this setup for servo channel reversing:

Throttle: Normal	Aileron: Reverse
Elevator: Normal	Rudder: Normal

### Receiver elevons connection for DX6i

When using the DX6i transmitter, it is necessary to access the AR6400NBL receiver and exchange the aileron and elevator connections where they plug into the receiver "as shown below" in order to achieve the correct control direction.

When complete, replace and tape the hatch and do a control test to confirm that the model operates correctly.



## Model Setup

- For the first flight, fly the model in low rate. The first time you use high rate, fly at low to medium speed. High rate, as listed, is only for EXTREME maneuvering.
- Use a ruler and measure the surface's travel at the root of each control surface.

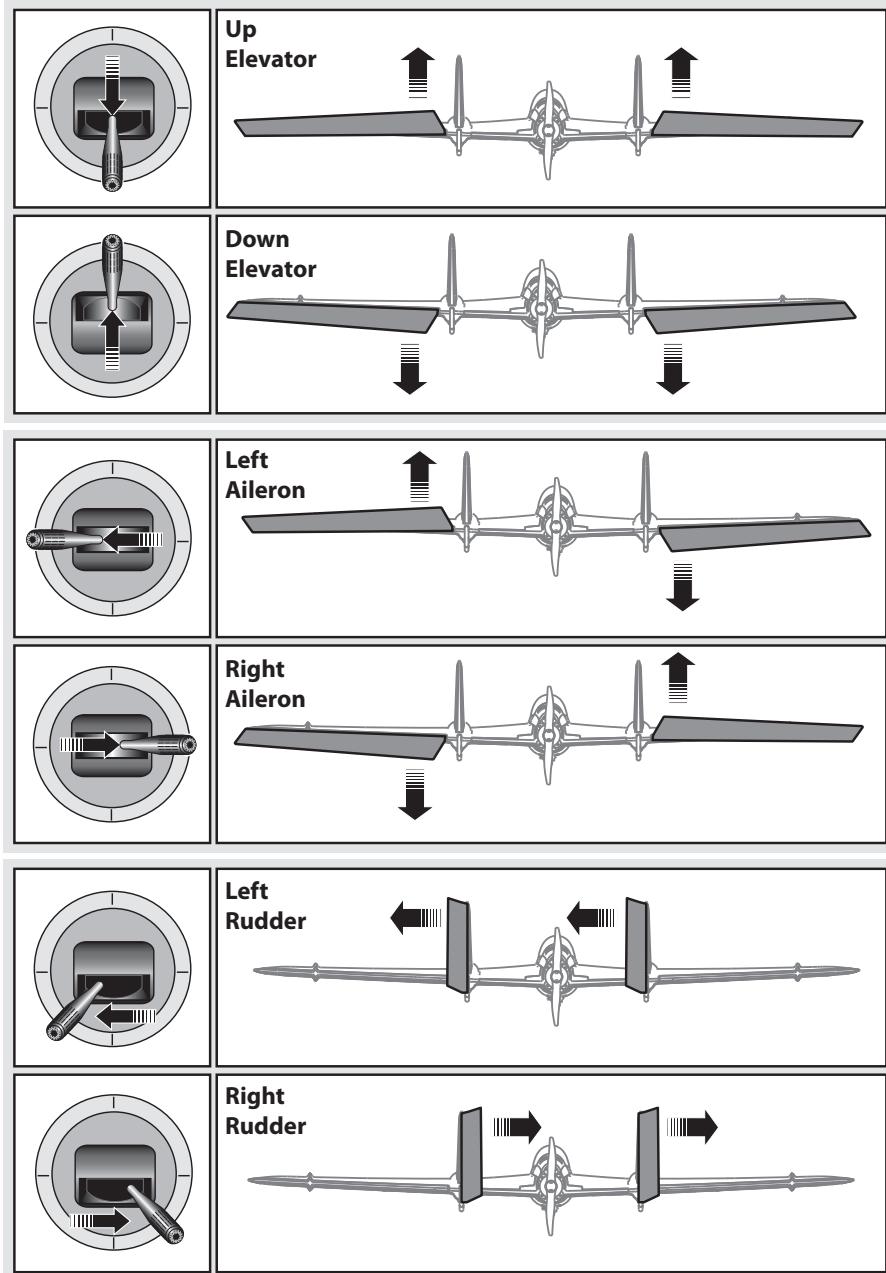
### Recommended Computerized Transmitter Dual Rates and Expo

	High Rate	Low Rate	Expo
Elevator	10–12mm up/down	5mm up/down	High–50% Low–20%
Aileron	10–12mm up/down	6mm up/down	High–40% Low–30%
Rudder	Max Travel	Max Travel	5%

# Control Direction Test

Bind your aircraft and transmitter before doing these tests (see Binding). Move the controls on the transmitter to make sure aircraft control surfaces move correctly (**Mode 2 shown**).

After doing the Control Test, correctly set the failsafe. Make sure the transmitter controls are neutral and the throttle and throttle trim are in the low position, then rebind the model to your transmitter. If the receiver loses link to the transmitter, failsafe makes the controls and throttle go to these settings made at binding.

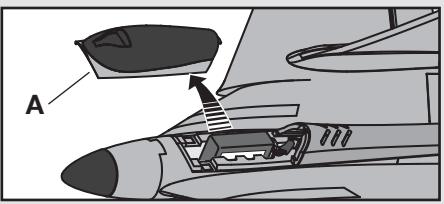


# Motor Service

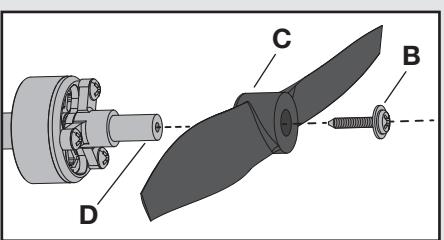
**⚠ CAUTION:** Always keep hands away from the propeller, ESC and motor while the flight battery is connected. Failure to do so could result in personal injury.

## Disassembly

1. Remove front canopy (**A**) from the fuselage.
2. Disconnect battery from ESC.
3. Remove battery from hook and loop strips in fuselage.
4. Cut tape on one side of fuselage for the rear hatch. Move the rear hatch, using the remaining tape as a hinge.
5. Disconnect motor connector from ESC/receiver connector.

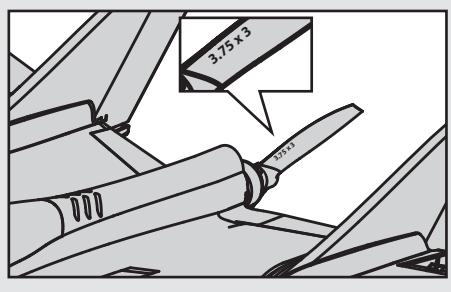
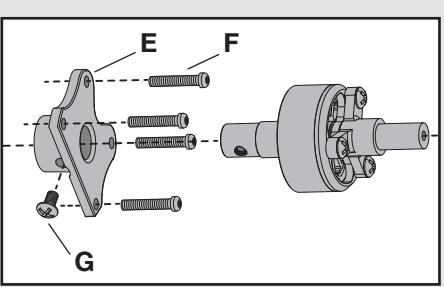


6. Remove screw (**B**) and propeller (**C**) from motor shaft (**D**).
7. Remove 4 screws (**F**) from motor mount (**E**) and firewall of fuselage.
8. Remove the screw (**G**) and motor from the motor mount.



## Assembly

1. Assemble model by following instructions above in reverse.
2. Make sure propeller size numbers (3.75 x 3) face the motor (see illustration).
3. Use a small amount of clear tape to hold the motor wires on the fuselage. Make sure the wires are securely in place when the rear hatch is installed on the fuselage.



# Flying Tips and Repairs

## Range Check your Radio System

After final assembly, range check the radio system with the Ultra Micro Stryker. Refer to your specific transmitter instruction manual for range test information.

**⚠ CAUTION:** Keep hands away from the propeller. Always assume the motor is powered on and that the propeller blades may turn at any time.

## Launching

Always inspect and repair model before flying. Any damage or loose linkages may decrease control in high-speed flight.

**⚠ CAUTION:** Always launch the model with the throttle set at 0% to avoid injury from the propeller. When the model is safely free of your hand, increase throttle to between 60 and 100%.

Always launch your model at a very small upward angle and directly into the wind, even in a light breeze.

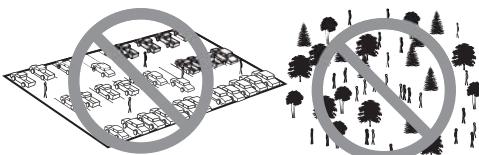
When launching your model for the first time, set the dual rate in your transmitter to the low rate position.

## Hand Launching

To hand launch the Ultra Micro Stryker, hold the airplane in the finger grips on the underside of the airplane. Give a firm throw directly into the wind slightly up (5-10 degrees above the horizon) with the throttle all the way down and the propeller not spinning. After release, when the propeller is clear of your hands, add throttle to climb.

## Flying

Only fly your Ultra Micro Stryker in light winds. Always choose a wide-open space for flying your Ultra Micro Stryker. Always avoid flying near houses, trees, wires and buildings. You should also be careful to avoid flying in areas where there are many people, such as busy parks, schoolyards, or soccer fields. Consult local laws and ordinances before choosing a location to fly your aircraft.



For your first flights, set your transmitter timer to 5 minutes. Adjust your timer for longer or shorter flights once you have flown the model.

## Over Current Protection (OCP)

The UM F-27Q Stryker is equipped with Over Current Protection (OCP). This feature protects the ESC from overheating. OCP stops the motor when the transmitter throttle is set high and the propeller cannot turn. The OCP will only activate when throttle is positioned just above 1/2 throttle. After the ESC stops the motor, fully lower the throttle to re-arm the ESC.

## Landing

Land the model when you notice a reduction in power. If using a transmitter with a timer, set the timer so you have enough flight time to make several landing approaches.

The model's nose wheel and bottom fin skids let the model land on hard surfaces when needed (which may damage the propeller). Align model directly into the wind and fly down to the ground using 1/4 to 1/3 throttle to keep enough energy for a proper flare. Before the model touches down, always fully decrease throttle to avoid damage to propeller, motor, ESC or other components.

Failure to lower the throttle stick and throttle trim to the lowest possible positions during a crash could result in damage to the ESC in the receiver unit.



**NOTICE:** Crash damage is not covered under warranty.

## Repairs

Repair the Ultra Micro Stryker using foam-compatible CA (cyanocrylate adhesive) glue or clear tape. Only use foam-compatible CA, as other types of glue can damage the foam. When parts are not repairable, see the Replacement Parts List.

For a listing of all replacement and optional parts, refer to the list at the back of this manual.

**NOTICE:** Use of foam-compatible CA accelerator on your model can damage paint. DO NOT handle model until accelerator fully dries.

# Additional Safety Precautions and Warnings

As the user of this product, you are solely responsible for operating in a manner that does not endanger yourself and others, or result in damage to the product or the property of others.

This model is controlled by a radio signal subject to interference from many sources outside your control. This interference can cause momentary loss of control, so it is advisable to always keep a safe distance in all directions around your model. This margin will help avoid collisions or injury.

- Always keep a safe distance in all directions around your model to avoid collisions or injury.
- Always operate your model in open spaces away from full-size vehicles, traffic and people.

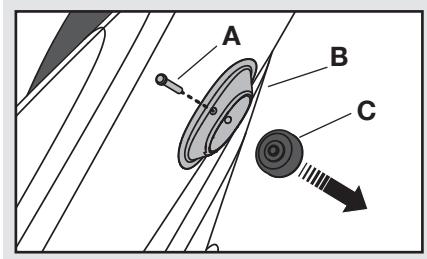
- Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
- Always keep all chemicals, small parts and anything electrical out of the reach of children.
- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to electronics.
- Never place any portion of the model in your mouth as it could cause serious injury or even death.
- Never operate your model with low transmitter batteries.

## Maintenance After Flying

1. Disconnect flight battery from the Receiver/ESC (Required for Safety).
2. Power off transmitter.
3. Remove flight battery from aircraft.
4. Recharge flight battery.
5. Repair or replace all loose or damaged parts.
6. Store flight battery apart from aircraft and monitor the battery charge.
7. Make note of flight conditions and flight plan results, planning for future flights.

## Nose Wheel

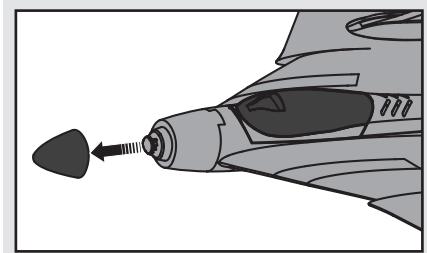
1. Remove and retain screw (A) from nose wheel pant (B) and nose wheel (C).
2. Remove wheel from nose wheel pant.
3. Install wheel and screw in nose wheel pant.



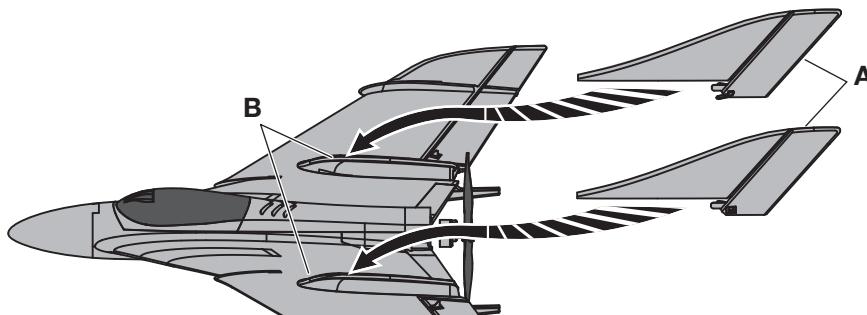
## Repairing/Replacing Nose

**NOTICE:** Always repair or replace the nose when it is damaged to keep the model flying correctly.

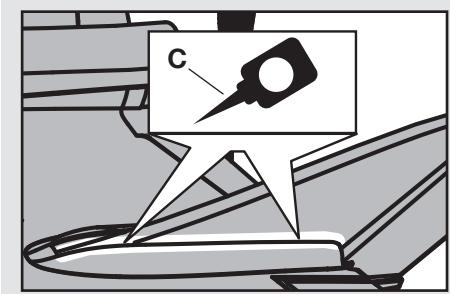
1. When damaged, pull soft nose cone from glue and pin on front of fuselage.
2. Install nose cone on front of fuselage using a small amount of foam-compatible CA.



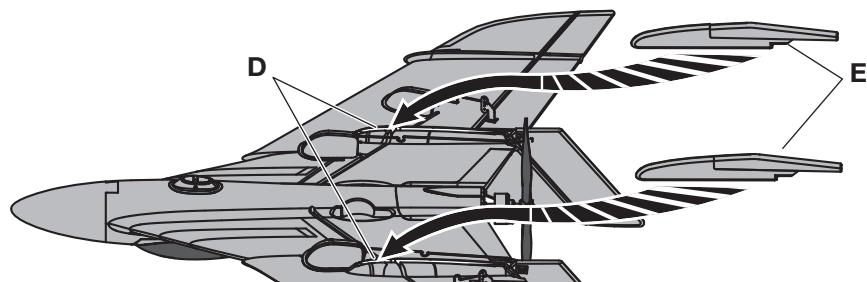
## Replacing Vertical Fins



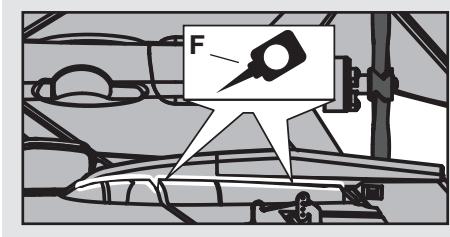
1. When a vertical fin or rudder is damaged beyond repair using foam-compatible CA, disconnect linkage from control horn.
2. Carefully cut vertical fin from housing in fuselage.
3. Clean glue from fuselage housing.
4. Attach new vertical fin and rudder (A) in fuselage housing (B) using foam-compatible CA (C).
5. Attach linkage to rudder's control horn.



## Replacing Sub-Fins



1. When a sub-fin is damaged beyond repair using foam-compatible CA, carefully cut sub-fin from housing in fuselage.
2. Clean glue from fuselage housing.
3. Attach a new sub-fin (D) in fuselage housing (E) using foam-compatible CA (F).



# Troubleshooting Guide

Problem	Possible Cause	Solution
Aircraft will not respond to throttle but responds to other controls	Throttle stick and/or throttle trim is too high	Reset controls with throttle stick and throttle trim at lowest setting
	Throttle channel is reversed	Reverse throttle channel on transmitter
	Motor is unplugged from receiver	Open fuselage and ensure the plug for the motor is properly installed
Extra propeller noise or extra vibration	Damaged propeller, prop shaft or motor	Replace damaged parts
	Screw on prop shaft is too loose	Tighten the prop shaft screw 1/2 turn
Reduced flight time or aircraft underpowered	Flight battery charge is low	Completely recharge flight battery
	Propeller is installed backwards	Install propeller with numbers facing forward
	Flight battery is damaged	Replace flight battery and follow flight battery instructions
	Flight conditions may be too cold	Make sure battery is warm before use
	Battery capacity is too low for flight conditions	Replace battery or use a larger capacity battery
LED on receiver flashes rapidly and aircraft will not bind to transmitter (during binding)	Transmitter is too near aircraft during binding process	Power off transmitter, move transmitter a larger distance from aircraft, disconnect and reconnect flight battery to aircraft and follow binding instructions
	Bind switch or button was not held while transmitter was powered on	Power off transmitter and repeat bind process
LED on receiver flashes rapidly and aircraft will not respond to transmitter (after binding)	Less than a 5-second wait between first powering on transmitter and connecting flight battery to aircraft	Leaving transmitter on, disconnect and reconnect flight battery to aircraft
	Aircraft is bound to a different model memory (ModelMatch™ radios only)	Select correct model memory on transmitter and disconnect and reconnect flight battery to aircraft
	Flight battery/transmitter battery charge is too low	Replace/recharge batteries
Control surface does not move	Control surface, control horn, linkage or servo damage	Replace or repair damaged parts and adjust controls
	Wire damaged or connections loose	Do a check of wires and connections; connect or replace as needed
	Flight battery charge is low	Fully recharge flight battery
	Control linkage does not move freely	Make sure control linkage moves freely
Controls reversed	Transmitter settings reversed	Do the Control Direction Test and adjust controls on transmitter appropriately (See Transmitter and Model Setup page).
Only one elevon responds to controls	Transmitter's elevon function not activated	Activate elevon function on transmitter. In some transmitters, this function is also known as Delta Wing.
Motor loses power	Damage to motor or power components	Do a check of motor and power components for damage (replace as needed)
Motor power quickly decreases and increases then motor loses power	Battery power is down to the point of receiver/ESC Low Voltage Cutoff (LVC)	Recharge flight battery or replace battery that is no longer performing
Servo locks or freezes at full travel	Travel adjust value is set above 100% overdriving the servo	Set Travel adjust to 100% or less and/or set sub trims to Zero and adjust linkages mechanically.

# Limited Warranty

## What this Warranty Covers

Horizon Hobby, Inc. ("Horizon") warrants to the original purchaser that the product purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase.

## What is Not Covered

This warranty is not transferable and does not cover (i) cosmetic damage, (ii) damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or due to improper use, installation, operation or maintenance, (iii) modification of or to any part of the Product, (iv) attempted service by anyone other than a Horizon Hobby authorized service center, or (v) Products not purchased from an authorized Horizon dealer.

**OTHER THAN THE EXPRESS WARRANTY ABOVE, HORIZON MAKES NO OTHER WARRANTY OR REPRESENTATION, AND HEREBY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.**

## Purchaser's Remedy

Horizon's sole obligation and purchaser's sole and exclusive remedy shall be that Horizon will, at its option, either (i) service, or (ii) replace, any Product determined by Horizon to be defective. Horizon reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of Horizon. Proof of purchase is required for all warranty claims. **SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY.**

## Limitation of Liability

**HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, EVEN IF HORIZON HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.** Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. If you as the purchaser or user are not prepared to accept the liability associated with the use of the Product, purchaser is advised to return the Product immediately in new and unused condition to the place of purchase.

## Law

These terms are governed by Illinois law (without regard to conflict of law principals). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Horizon reserves the right to change or modify this warranty at any time without notice.

## Warranty Services

### Questions, Assistance, and Services

Your local hobby store and/or place of purchase cannot provide warranty support or service. Once assembly, setup or use of the Product has been started, you must contact your local distributor or Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please direct your email to [productsupport@horizonhobby.com](mailto:productsupport@horizonhobby.com), or call 877.504.0233 toll free to speak to a Product Support representative. You may also find information on our website at [www.horizonhobby.com](http://www.horizonhobby.com).

## Inspection or Services

If this Product needs to be inspected or serviced, please use the Horizon Online Service Request submission process found on our website or call Horizon to obtain a Return Merchandise Authorization (RMA) number. Pack the Product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as Horizon is not responsible for merchandise until it arrives and is accepted at our facility. An Online Service Request is available at [www.horizonhobby.com](http://www.horizonhobby.com) under the Support tab. If you do not have internet access, please contact Horizon Product Support to obtain a RMA number along with instructions for submitting your product for service. When calling Horizon, you will be asked to provide your complete name, street address, email address and phone number where you can be reached during business hours. When sending product into Horizon, please include your RMA number, a list of the included items, and a brief summary of the problem. A copy of your original sales receipt must be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

**Notice: Do not ship LiPo batteries to Horizon. If you have any issue with a LiPo battery, please contact the appropriate Horizon Product Support office.**

## Warranty Requirements

**For Warranty consideration, you must include your original sales receipt verifying the proof-of-purchase date.** Provided warranty conditions have been met, your Product will be serviced or replaced free of charge. Service or replacement decisions are at the sole discretion of Horizon.

## Non-Warranty Service

**Should your service not be covered by warranty service will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost.** By submitting the item for service you are agreeing to payment of the service without notification. Service estimates are available upon request. You must include this request with your item submitted for service. Non-warranty service estimates will be billed a minimum of 1/2 hour of labor. In addition you will be billed for return freight. Horizon accepts money orders and cashiers checks, as well as Visa, MasterCard, American Express, and Discover cards. By submitting any item to Horizon for service, you are agreeing to Horizon's Terms and Conditions found on our website [www.horizonhobby.com/Service/Request/](http://www.horizonhobby.com/Service/Request/).

# Warranty and Service Information

Country of Purchase	Horizon Hobby	Address	Phone Number/Email Address
United States of America	Horizon Service Center (Electronics and engines)	4105 Fieldstone Rd Champaign, Illinois 61822 USA	877-504-0233 Online Repair Request visit: <a href="http://www.horizonhobby.com/service">www.horizonhobby.com/service</a>
	Horizon Product Support (All other products)	4105 Fieldstone Rd Champaign, Illinois 61822 USA	877-504-0233 <a href="mailto:productsupport@horizonhobby.com">productsupport@horizonhobby.com</a>
United Kingdom	Horizon Hobby Limited	Units 1-4 Ployters Rd Staple Tye Harlow, Essex CM18 7NS, United Kingdom	+44 (0) 1279 641 097 <a href="mailto:sales@horizonhobby.co.uk">sales@horizonhobby.co.uk</a>
Germany	Horizon Technischer Service	Hamburger Str. 10 25335 Elmshorn, Germany	+49 4121 46199 66 <a href="mailto:service@horizonhobby.de">service@horizonhobby.de</a>
France	Horizon Hobby SAS	14 Rue Gustave Eiffel Zone d'Activité du Réveil Matin 91230 Montgeron	+33 (0) 1 60 47 44 70 <a href="mailto:infofrance@horizonhobby.com">infofrance@horizonhobby.com</a>

## Compliance Information for the European Union

### Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

No. HH2011052801

Product(s): PKZ Ultra Micro F-27Q 180 BNF

Item Number(s): PKZU2280

Equipment class: 1

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC and EMC Directive 2004/108/EC

**EN 301 489-1 V1.7.1: 2006**

**EN 301 489-17 V1.3.2: 2008**

**EN55022: 2006,**

**EN55024: 1998+A1: 2001+A2: 2003**



Signed for and on behalf of:

Horizon Hobby, Inc.

Champaign, IL USA

May 28, 2011

Steven A. Hall

Vice President

International Operations and Risk Management

Horizon Hobby, Inc.

### Instructions for disposal of WEEE by users in the European Union



This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collections point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.

# Replacement Parts • Ersatzteile • Pièces de rechange

## • Pezzi di ricambio

Part #   Nummer Numéro   Codice	Description	Beschreibung	Description	Descrizione
PKZU2203	Decal Set: UM F-27Q Stryker	Dekorbogen Set: UM F-27-Q Stryker	UM F-27Q Stryker : Planche de deco	Set adesivi: UM F-27Q Stryker
PKZU2206	Gear with Wheel: UM F-27Q Stryker	Fahrwerk mit Rad: UM F-27Q Stryker	UM F-27Q Stryker : Train avec roues	Carrello con ruota: UM F-27Q Stryker
PKZU2220	Wing/Fuse w/Nose: UM F27Q Stryker	Tragfl./ Rumpf m. Nase: mUMF27-Q Stryker	UM F-27Q Stryker : Aile, fuselage et nez	Ala/Fusoliera con ogiva: UM F27Q Stryker
PKZU2222	Pushrod Set: UM F-27Q Stryker	Gestänge Set: UM F-27Q Stryker	UM F-27Q Stryker : Set de tringleries	Set rinvii: UM F-27Q Stryker
PKZU2225	Vertical Fin Right: UM F-27Q Stryker	Vertikal Finne Rechts: UM F-27Q Stryker	UM F-27Q Stryker : Dérive droite	Impennaggio verticale destro: UM F-27Q Stryker
PKZU2226	Vertical Fin left: UM F-27Q Stryker	Vertikal Finne Links: UM F-27Q Stryker	UM F-27Q Stryker : Dérive gauche	Impennaggio verticale sinistro: UM F-27Q Stryker
PKZU2227	Rear Hatch: UM F-27Q Stryker	Rumpfabdeckung hinten: UM F-27Q Stryker	UM F-27Q Stryker : Capot arrière	Copertura posteriore: UM F-27Q Stryker
PKZU2228	Canopy: UM F-27Q Stryker	Kabinenhaube: UM F-27Q Stryker	UM F-27Q Stryker : Verrière	Capottina: UM F-27Q Stryker
PKZU2229	Bottom Fin Set: UM F-27Q Stryker	Untere Finnen Set: UM F-27Q Stryker	UM F-27Q Stryker : Set de dérives inférieures	Set impennaggi inferiori: UM F-27Q Stryker
PKZU2230	Control Horn Set: UM F-27Q Stryker	Ruderhorn Set: UM F-27Q Stryker	UM F-27Q Stryker : Palonniers	Set squadrette: UM F-27Q Stryker
PKZU2231	Wheel with Bolt: UM F-27 Stryker	Rad mit Schraube: UM F-27 Stryker	UM F-27Q Stryker : Roue avec écrou	Ruota con perno: UM F-27 Stryker
PKZU2252	Rubber Nose: UM F-27Q Stryker	Gummi Nase: UM F-27Q Stryker	UM F-27Q Stryker : Nez en caoutchouc	Ogiva in gomma: UM F-27Q Stryker
PKZU2253	Servo Cover Set: UM F-27 Stryker	Servo Abdeckung Set: UM F-27 Stryker	UM F-27Q Stryker : Set de caches servos	Set copertura servo: UM F-27 Stryker
PKZU2267	Motor Mount: UM F-27Q Stryker	Motorträger: UM F-27Q Stryker	UM F-27Q Stryker : Support moteur	Supporto motore: UM F-27Q Stryker
EFLUM180BLB	BL180 Brushless Outrunner Motor, 3000Kv	BL180 Brushless Außenläufer Motor, 3000 Kv	Moteur brushless à cage tournante BL180 3000Kv	BL180 Brushless Motore a cassa rotante, 3000Kv
EFLUP037503	3.75 x 3 Propeller: UM F-27Q Stryker	3.75x3 Propeller: UM F-27Q Stryker	UM F-27Q Stryker : Hélice 3.75x3	3.75 x 3 Elica: UM F-27Q Stryker
EFLB2002S25	200mAh 2S 7.4V 25C Li-Po, 26AWG	200mAh 2S 7.4V 25C Li-Po Akku, 26AWG	Batterie Li-Po 7.4V 2S 200mA 25C	200mAh 2S 7.4V 25C Li-Po, 26AWG
EFLUC1007	Clectra 2S 7.4V DC Li-Po Charger	Clectra 2S 7.4V DC Li-Po Ladegerät	Chargeur Clectra Li-Po 2S	Clectra 2S 7.4V DC Li-Po Caricabatterie
EFLUC1008	DC Power Cord: UMX Beast	DC Ladekabel UMX Beast	Alimentation DC	DC Cavo alimentazione: UMX Beast
EFLH1067	Servo Retaining Collars: BMCX/2/MSR, FHX, MH-35	Sicherung Servo: BMCX/2/MSR	BMCX/2/MSR, FHX, MH-35 : Clips d'axe de servo	Collari fissaggio servi: BMCX/2/MSR, FHX, MH-35
EFLU4067	Prop Adaptor: UMX Beast	E-flite UMX Beast Luftschräubenmitnehmer	UMX Beast -Adaptateur d'hélic	Adattatore elica: UMX Beast
SPM6832	Replacement Servo Mechanics: Ultra Micro Long Throw	Austausch Servo Mechanik:Ultra Micro Long Throw	Mécanique d'ultra micro servo longue course	Meccanica ricambio servo: Ultra Micro Long Throw
SPMAR6400NBL	AR6400NBL DSM 6-Channel/Receiver	AR6400NBL DSM 6-Kanal / Empfänger	AR6400NBL DSM récepteur 6 voies	AR6400NBL DSM 6-canali/Ricevitore
SPMAS2000L	1.7-Gram Linear Long Throw Servo	Spektrum 1.5g Linear Servo, Weg lang	Servo linéaire longue course, 1.7g	Servo lineare a corsa lunga - 1,7 g

# Optional Parts and Accessories • Optionale Bauteile und Zubehör • Pièces et accessoires optionnels • Componenti e accessori opzionali

Part #   Nummer Numéro   Codice	Description	Beschreibung	Description	Descrizione
PKZ1039	Hook and Loop Set (5): Ultra Micros	Parkzone Klettband (5): Ultra Micros	Ultra micro -Set de bande auto-agripante (5)	Set fascette (5): Ultra Micros
EFLA700UM	Charger Plug Adapter: EFL	Ladekabel Adapter EFL	Prise d'adaptateur de chargeur EFL	Adattatore connettore caricabatterie: EFL
EFLA7001UM	Charger Plug Adapter: TP	Ladekabel Adapter EFL	Prise d'adaptateur de chargeur TP	Adattatore connettore caricabatterie: TP
EFLU4068	Harness Adapter: UMX Beast	E-flite UMX Beast Y-Kabel	UMX Beast -adaptateur de câbles	Adattatore cavi: UMX Beast
EFLUB1802S20	180 mAh 2s 7.4V 20C Li-Po, 26AWG	180 mAh 2s 7.4V 20C Li-Po, 26AWG	Batterie Li-Po 7.4V 2S 180mA 20C	180 mAh 2s 7.4V 20C Li-Po, 26AWG
SPM6825	AS2000 Servo Reverser	AS2000 Servokabel-adapter	Inverseur de servo AS2000	AS2000 Inversore per servo
ELFC4000	AC to 12V DC, 1.5-Amp Power Supply (US)	AC to 12V DC, 1.5-Amp Power Supply (US)	Adaptateur secteur vers 12V DC, 1.5A (US)	AC to 12V DC, 1.5- Amp Alimentatore (US)
EFLC4000UK	AC to 12V DC,1.5-Amp Power Supply (UK)	AC to 12V DC,1.5-Amp Power Supply (UK)	Adaptateur secteur vers 12V DC, 1.5A (UK)	AC to 12V DC,1.5- Amp Alimentatore (UK)
EFLC4000AU	AC to 12V DC,1.5-Amp Power Supply (AU)	AC to 12V DC,1.5-Amp Power Supply (AU)	Adaptateur secteur vers 12V DC, 1.5A (AU)	AC to 12V DC,1.5- Amp Alimentatore (AU)
EFLC4000EU	AC to 12V DC,1.5-Amp Power Supply (EU)	E-flite Netzteil 1.5A, EU Stecker	Adaptateur secteur vers 12V DC, 1.5A (EU)	AC to 12V DC,1.5- Amp Alimentatore (EU)
SPMR6610	DX6i Transmitter Only Mode 2	DX6i-Sender (nur Sender) Mode 2	Émetteur DX6i uniquement Mode 2	Solo trasmettitore DX6i Modalità 2
SPMR66101	DX6i Transmitter Only Mode 1	DX6i-Sender (nur Sender) Mode 1	Émetteur DX6i uniquement Mode 1	Solo trasmettitore DX6i Modalità 1
SPMR6610E	DX6i Transmitter Only Mode 2 Int'l	DX6i-Sender (nur Sender) Mode 2 international	Émetteur DX6i uniquement Mode 2 International	Solo trasmettitore DX6i Modalità 2 Int'l
SPMR66101E	DX6i Transmitter Only Mode 1 Int'l	DX6i-Sender (nur Sender) Mode 1 international	Émetteur DX6i uniquement Mode 1 International	Solo trasmettitore DX6i Modalità 1 Int'l
SPMR8800	DX8 Transmitter Only Mode 2	DX8-Sender (nur Sender) Mode 2	Émetteur DX8 uniquement Mode 2	Solo trasmettitore DX8 Modalità 2
SPMR8800EU	DX8 Transmitter Only Mode 2 Int'l	DX8-Sender (nur Sender) Mode 2 international	Émetteur DX8 uniquement Mode 2 International	Solo trasmettitore DX8 Modalità 2 Int'l
SPMR88001AU	DX8 Transmitter Only Mode 1 AU	DX8-Sender (nur Sender) Mode 1 Australien	Émetteur DX8 uniquement Mode 1 AU	Solo trasmettitore DX8 Modalità 1 AU
SPMR88001EU	DX8 Transmitter Only Mode 1 Int'l	DX8-Sender (nur Sender) Mode 1 international	Émetteur DX8 uniquement Mode 1 International	Solo trasmettitore DX8 Modalità 1 Int'l

## Parts Contact Information • Kontaktinformationen für Ersatzteile • Coordonnées (pièces) • Recapiti dei distributori

Country of Purchase	Horizon Hobby	Address	Phone Number/ Email Address
United States	Sales	4105 Fieldstone Rd Champaign, Illinois, 61822 USA	800-338-4639 sales@horizonhobby.com
United Kingdom	Horizon Hobby Limited	Units 1-4 Ployters Rd Staple Tye Harlow, Essex CM18 7NS, United Kingdom	+44 (0) 1279 641 097 sales@horizonhobby.co.uk
Germany	Horizon Hobby GmbH	Hamburger Str. 10 25335 Elmshorn, Germany	+49 4121 46199 60 service@horizonhobby.de
France	Horizon Hobby SAS	14 Rue Gustave Eiffel Zone d'Activité du Réveil Matin 91230 Montgeron	+33 (0) 1 60 47 44 70 infofrance@horizonhobby.com

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US D578,146. PRC ZL 200720069025.2. US 7,898,130 Other patents pending.

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